

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Arthur L. Boright et al.

Attorney Docket No. BING-1-1053

Serial No.: 10/815,144

Group Art Unit:

Filing Date: March 31, 2004

Examiner:

Title: SUB-VISIBLE CLOUD COVER ASSESSMENT: VNIR-SWIR

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Commissioner:

Pursuant to 37 C.F.R. § 1.56 and in accordance with 37 C.F.R. §§1.97-1.98, information related to the above-identified application is hereby disclosed. Inclusion of information in this statement is not to be construed as an admission that this information is material as that term is defined in 37 C.F.R. § 1.56(b).

In accordance with §1.97(b), since this Information Disclosure Statement is being filed either within three months of the filing date of the above-identified application, within three months of the date of entry into the national stage of the above identified application as set forth in §1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, no additional fee is required.

The relevant publications are listed on the attached Form PTO-1449, along with a return receipt postcard. In accordance with 37 CFR § 1.98(a)(2)(i), copies of U.S. Patent references listed on the attached Form PTO-1449 are not enclosed. If the examiner requires copies of any

of these references please advise counsel accordingly. All other references are submitted herewith.

Respectfully submitted,

BLACK LOWE & GRAHAM<sup>PLLC</sup>



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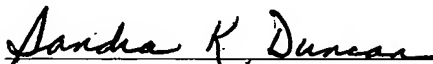
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I hereby certify that this communication is being deposited with the United States Postal Service via first class mail under 37 C.F.R. § 1.08 on the date indicated below addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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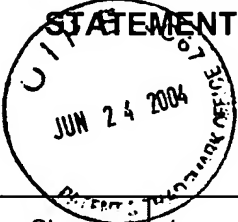
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> 				<i>Complete if Known</i>	
				Application Number	10/815,144
				Filing Date	March 31, 2004
				First Named Inventor	Arthur L. Boright
				Group Art Unit	
				Examiner Name	
Sheet	1	of	2	Attorney Docket Number	BING-1-1053

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code <sup>2</sup> (if known)		
	1.	4,465,940		Graff et al.	08-14-1984
	2.	4,921,349		Richards	05-01-1990
	3.	5,075,856		Kneizys et al.	12-24-1991
	4.	5,088,833	A	Tsang et al.	02-18-1992
	5.	6,531,701	B2	Chou et al.	03-11-2003

### NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	6.	Ackerman, S. A., et al., "Discriminating Clear Sky From Clouds With MODIS," Journal of Geophysical Research, December 27, 1998, Vol. 103, No. D24, pp. 32,141-32,157.	
	7.	Adler-Golden, S.M., et al., "An Algorithm for De-Shadowing Spectral Imagery," presented at the AVIRIS Earth Sciences and Applications Workshop, at the NASA Jet Propulsion Laboratory (2002).	
	8.	Boardman, J. W., 1993, "Automating Spectral Unmixing of AVIRIS Data Using Convex Geometry Concepts," in: Summaries of the Fourth Annual JPL Airborne Geoscience Workshop, Washington, D.C., v. 1.	
	9.	Choi, K-Y., et al., "A Multispectral Transform for the Suppression of Cloud Shadows," presented at the Fourth International Airborne Remote Sensing Conf. and Exhibition/21 <sup>st</sup> Canadian Symposium on Remote Sensing, Ottawa, Ontario, Canada, 11-14 June 1999.	
	10.	Diner, D. J., et al., "Earth Observing System Multi-angle Imaging Spectro-Radiometer (MISR) Level 1 Cloud Detection Algorithm Theoretical Basis," Jet Propulsion Laboratory, California Institute of Technology, December 7, 1999, Vol. D-13397, Rev. B, pp 1-38.	
	11.	Gao, B-C., et al., "An Algorithm Using Visible and 1.38- $\mu$ m Channels to Retrieve Cirrus Cloud Reflectances from Aircraft and Satellite Data, IEEE Transactions on Geoscience and Remote Sensing, August 2002, Vol. 40, No. 8, pp. 1659-1668.	
	12.	Gao, B-C., and Kaufman, Y. J., "Selection of the 1.375- $\mu$ m MODIS Channel for Remote Sensing of Cirrus Clouds and Stratospheric Aerosols from Space," American Meteorological Society, Journal of the Atmospheric Sciences, December 1, 1995, Vol. 52, No. 23, pp. 4231-4237.	
	13.	Gao, B-C., et al., "Correction of Thin Cirrus Path Radiances in the 0.4-1.0 $\mu$ m Spectral Region Using the Sensitive 1.375 $\mu$ m Cirrus Detecting Channel," J. Geophy. Research, December 27, 1998, Vol. 103, No. D24, pp. 32,169-32,176.	

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				Group Art Unit	
				Examiner Name	
Sheet	2	of	2	Attorney Docket Number	BING-1-1053

**NON PATENT LITERATURE DOCUMENTS (Cont.)**

	14.	Goodman, A. H. and Henderson-Sellers, A., "Cloud Detection and Analysis: A Review of Recent Progress," Atmospheric Research, 1988, Vol. 21, Nos. 3-4, pp. 229-240.	
	15.	Gwinner, K., et al., "A Case Study on the Influence of Shadows and Shading on Multispectral Airborne Imaging Data," presented at the Third International Airborne Remote Sensing Conf. and Exhibition, July 7-10, 1997 Copenhagen, Denmark.	
	16.	Irish, R.R., "Landsat 7 Automatic Cloud Cover Assessment, in Algorithms for Multispectral, Hyperspectral, and Ultraspectral Imagery VI," S. S. Chen, M. R. Descour, Editors, Proceedings of SPIE, 2000, Vol. 4049, pp. 348-355.	
	17.	King, M. D., et al., "Discriminating Heavy Aerosol, Clouds, and Fires During SCAR-B: Application of Airborne Multispectral MAS Data," J. Geophys. Research, December 27, 1998, Vol. 103, No. D24, pp. 31,989-31,999.	
	18.	Lissens, Gil, "Development of a Cloud, Snow and Cloud Shadow Mask for VEGETATION Imagery," in Proc. Vegetation 2000: 2 Years of Operation to Prepare the Future Workshop, G. Saint, Ed., Apr. 3-6, 2000, pp. 303-306.	
	19.	Logar, A., et al., "A Hybrid Histogram/Neural Network Classifier for Creating Global Cloud Masks," International Journal of Remote Sensing, 1997, Vol. 18, No. 4, pp. 847-869.	
	20.	Logar, A. M., et al., "The ASTER Polar Cloud Mask," IEEE Transactions of Geoscience and Remote Sensing, July 1998, Vol. 36, No. 4, pp. 1302-1312.	
	21.	Milton, E. J., et al., "Cloud Shadow Suppression Using a Feature Space Approach to the Identification of Virtual Endmembers," Proceedings of 25 <sup>th</sup> Annual Conference and Exhibition of the Remote Sensing Society, Cardiff, UK (1999).	
	22.	Rossow, W. B., et al., "Global, Seasonal Cloud Variations from Satellite Radiance Measurements. Part I: Sensitivity of Analysis," Journal of Climate, May 1989, Vol. 2, pp. 419-460.	
	23.	Rossow, W. B., et al., "ISCCP Cloud Algorithm Intercomparison," Journal of Climate and Applied Meteorology, September 1985, Vol. 24, No. 9, pp. 877-903.	
	24.	Rossow, W. B., "Measuring Cloud Properties from Space: A Review," Journal of Climate, March 1989, Vol. 2, pp. 201-215.	
	25.	Sèze, G., et al., "Cloud Cover Observed Simultaneously from POLDER and METEOSAT," Physics and Chemistry of the Earth Part B: Hydrology, Oceans and Atmosphere, 1999, Vol. 24, No. 8, pp. 921-926.	
	26.	Simpson, J. J., et al., "A Procedure for the Detection and Removal of Cloud Shadow from AVHRR Data Over Land," IEEE Transactions on Geoscience and Remote Sensing, Vol. 36, No. 3, pp. 880-897, May 1998.	
	27.	Simpson, J. J., et al., "Cloud Shadow Detection Under Arbitrary Viewing and Illumination Conditions," IEEE Transactions on Geoscience and Remote Sensing, March 2000, Vol. 38, No. 2, pp. 972-976,	
	28.	Varlyguin, D. L., et al., "Advances in Land Cover Classification for Applications Research: A Case Study from The Mid-Atlantic RESAC. Available at <a href="http://www.geog.umd.edu/resac">www.geog.umd.edu/resac</a> and on ASPRS-2001 CD-ROM in American Society for Photogrammetry and Remote Sensing (ASPRS) Conference Proceedings, Washington DC (2001).	
	29.	Vermote, E. F., et al., "A SeaWiFS Global Monthly Coarse-Resolution Reflectance Dataset," International Journal of Remote Sensing, 2001, Vol. 22, No. 6, pp. 1151-1158.	
	30.	Wang, B., et al., "Automated Detection and Removal of Clouds and their Shadows from Landsat TM Images," IEICE Trans., Inf. & Syst., Vol. E82-D, No. 2, February 1999.	